

186 Iron Horse Court, Suite 101, Yakima, WA. 98901
Phone: (509) 834-2050 Fax: (509) 834-2060
Website: <http://www.yakimacleanair.org>

Filing Fee: \$400.00*

*Pursuant to WAC 173-400-111(1) (c)-an application is not complete until the permit application filing fee required by YRCAA has been paid.

OFFICIAL USE ONLY

YRCAA NSR No: NSRP-03-WM-26 Date Fee Paid: 3/19/2026

Received by: EGR, DL - email Filing Fee: \$400.00

☐ YRCAA is the lead agency for the SEPA process. Processing Fee \$400.00

Review of the application will not begin, until the application filing fee is paid. A surcharge fee for the time required for preparing and processing the application for approval will be invoiced after the permit to operate is issued.

New Source Review (NSR) Application General

Stationary/Permanent Source

INSTALLATION OR ESTABLISHMENT OF NEW AIR CONTAMINANT SOURCES

NSR Application is Required for Construction, Installation or Establishment of an Air Pollution Source
Or
Replacement or Substantial Alteration of Emission Control Technology on an Air Pollution Source or Equipment

I. General Information:

BUSINESS NAME Western Materials

NATURE OF BUSINESS Concrete Block Manufacturer

MAILING ADDRESS PO Box 430 Yakima WA 98907

FACILITY ADDRESS (if different): 1202 S. First St, Yakima WA ~~98902~~ 98901

PHONE and FAX NUMBERS (509) 494-9245

Email: hbrun@westernmaterials.com

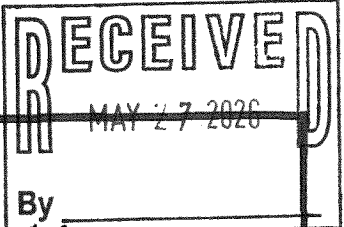
TYPE OF PROCESS, EQUIPMENT, OR APPARATUS (1) Indirect "Max-eff" NG Burner, (1) High eff. Air Circulation Fan, Gas-Safe Measurement System

LIST OF AIR CONTAMINANT(S) WHICH WILL BE PRODUCED AND/OR CONTROLLED

PM₁₀, NO_x, SO_x, CO, CH₄, Pb, TOC, CO₂, TNMOC

ESTIMATED STARTING DATE: 2/19/26

ESTIMATED COMPLETION DATE: 2/20/26



Compliance with SEPA (State Environmental Policy Act) - Check One of the Options Below:

- ☐ A DNS or EIS has been Issued by Another Agency for this Project and a Copy is Attached.
- ☐ If no DNS or EIS Exists for this Project, a Completed Checklist for this Project and the SEPA Processing Fee are Attached. YRCAA SEPA checklist is available by phone, or by our website.
- ☐ The city/county has established an exemption for this project.
- ☒ I certify that the SEPA has been satisfied or this project is exempt:

3/9/2026 by John A. [Signature] Planning Manager City of Tukwila
Date Government Agency

Previous NSR/Air Permits Number issued by YRCAA for the Facility, if any NSRP-06-WM-09

Describe Input to Output Process (Attach drawings, schematics, prints, or block diagrams) Concrete blocks are created in the block plant. The blocks are transferred to the kilns where the N.G. fired burner heats the air. The vapor generator creates steam in the chambers. The air circulation fan moves the steam around. After curing the steam is released.

ESTIMATED COSTS: OF BASIC SOURCE EQUIPMENT \$ 213,000

OF CONTAMINANT CONTROL APPARATUS \$ 0

Process: Production Output per Year (tons, pounds, etc) 45,723 tons

Maximum Output per Hour (tons, pounds, etc) 19 tons

Percentage of Production (%)

Dec - Feb 16%
Jun - Aug 28%

Mar - May 28%
Sep - Nov 28%

Operating Schedule: Hrs/Day 12 Days/Wk 4 Wks/Yr 49

II. Emissions Estimations and Calculations:

1. Criteria Pollutants (gr/dscf, tons/yr, lbs/hr., ppm, etc.)

Particulate (PM₁₀, PM_{2.5}) 454 ton/yr 0 - see fugitive pollutant

Volatile Organic Compounds 0

Nitrogen Oxides 0.0005 ton/yr

Sulfur Oxides 0.0003 ton/yr

Carbon Monoxide 0.001 ton/yr

Lead 2.73 x 10⁻⁷ ton/yr

2. Toxic Air Pollutants (Name)

Quantity (in gr/dscf, tons/yr, lbs/hr. ppm, etc.)

0

3. Fugitive Pollutants (Source) _____ Quantity (in gr/dscf, tons/yr, lbs/hr, ppm, etc.) _____
PM₁₀ - wind blown aggregate 454 Ton/yr
+ sand storage _____
CH₄ - from Nat. Gas 0.14 Ton/yr
combustion _____
4. Air Pollution Modeling
Results None
Computer Printout Attached? ☐ Yes ☒ No

III. Emission Data:

1. Stack Height (Feet) _____ Inside Diameter (feet) _____
Gas Exit Temp (degrees F) _____ Gas Exit Velocity (ft/min) _____
Flow Rate (cfm) _____
Shared Stack? If a shared stack, identify process (es) or point(s) which share the stack.
Distance from Stack to Property Line _____

2. Discharge Point or points (if no stack or other than stack)

Height (feet) _____ Inside Diameter (feet) _____
Gas Exit Temp (degrees F) _____ Gas Exit Velocity (ft/min) _____
Flow Rate (cfm) _____

No point source discharge of emissions.

Shared discharge point? If a shared discharge point, identify process (es) or point(s) which share the discharge point. _____

Distance from discharge point to Property Line _____

3. Fuel Type Natural Gas % Sulfur _____
% Ash _____ Unit of Measure (gal./cu.ft./etc.) _____
BTU per Unit of Measure 1,020 BTU/ft³ Consumption Units per Year 1,145 MMBTU/yr
Maximum Consumption Units per Hour 345,949 BTU/hr

4. Building Dimensions

Height (feet) 16' Length (feet) 103 Width (feet) 64.5

IV. Air Pollution Control Equipment:

No air pollution control equipment

Baghouse	Type _____	Model #, Serial # _____
	Efficiency _____	PM _{2.5} : _____ and PM ₁₀ : _____
	Bag Height (feet) _____	Bag Diameter (feet) _____
	Filter Area (feet squared) _____	Blower Flow Rate (cfm) _____
	Filter Media _____	Dimensions (feet) _____
	Discharge Area Dimensions (feet) _____	
	Cleaning Mechanism (shake) (air psi) _____	
	Other Data _____	
Scrubber	Type _____	Model #, Serial # _____
	Efficiency _____	
	Gas Differential Pressure (psi) _____	Liquor Differential Pressure (psi) _____
	Liquor Flow (gpm) _____	Discharge Area Dimensions (feet ²) _____
	Gas Flow (cfm) _____	Other Data _____
Cyclone	Type _____	Model #, Serial # _____
	Efficiency _____	PM _{2.5} : _____ and PM ₁₀ : _____
	Gas Flow (cfm) _____	Discharge Area Dimensions (feet ²) _____
	Other Data _____	
Precipitator	Type _____	Model #, Serial # _____
	Efficiency _____	
	Gas Flow (cfm) _____	Gas Velocity (ft/sec) _____
	Residence Time _____	Gas Differential Pressure (psi) _____
	Precipitation Rate (ft/sec) _____	Discharge Area Dimensions (feet ²) _____
	Other Data _____	
Ad/Absorp	Type _____	Model #, Serial # _____
	Efficiency _____	
	Gas Flow _____	Gas Velocity (ft/sec) _____
	Gas Temp (degree F) _____	Bed Volume (ft ³) _____
	Bed Dimensions (feet) _____	Capacity (hours) _____
	Contaminant (lb/day) _____	Regeneration time (hours) _____

Other

Type _____

Model #, Serial # _____

Efficiency _____

Gas Flow (cfm) _____

Discharge Area Dimensions (feet) _____

Other Data _____

V. Additional Information:

1. Attach Related Information on Chemicals or Materials that will be emitted. (MSDS Sheets, Company Information, etc.)

Note: Indicate how much quantity are used per MSDSs

☐ Yes ☒ No, if not why? No emissions from chemicals

2. Fugitive Dust Control Plan (Attach if Necessary)

3. Attach Operation and Maintenance Manual of Pollution Control Equipment.

☐ Yes ☒ No, if not, why? No pollution control equipment

4. Attach Vendor Information or Manufacturer's Instructions on Pollution Control Equipment.

☐ Yes ☒ No, if not, why? No pollution control equipment

APPLICANT: I hereby certify that the information contained in this application, including supplemental forms and data, when required, is, to the best of my knowledge, complete and correct. I also agree to all fees for processing this permit and grant permission for YRCAA staff to enter the premises for inspection.

Signature Natalie Martinkus, PE, PhD Date 3/19/26

Title Founder, EcoAnalytics Date 3/19/26

Name and Title of Individual Filling out Form:

Name (print) Natalie Martinkus

Signature Natalie Martinkus

Name and Title of Contact Person, if Different than Above:

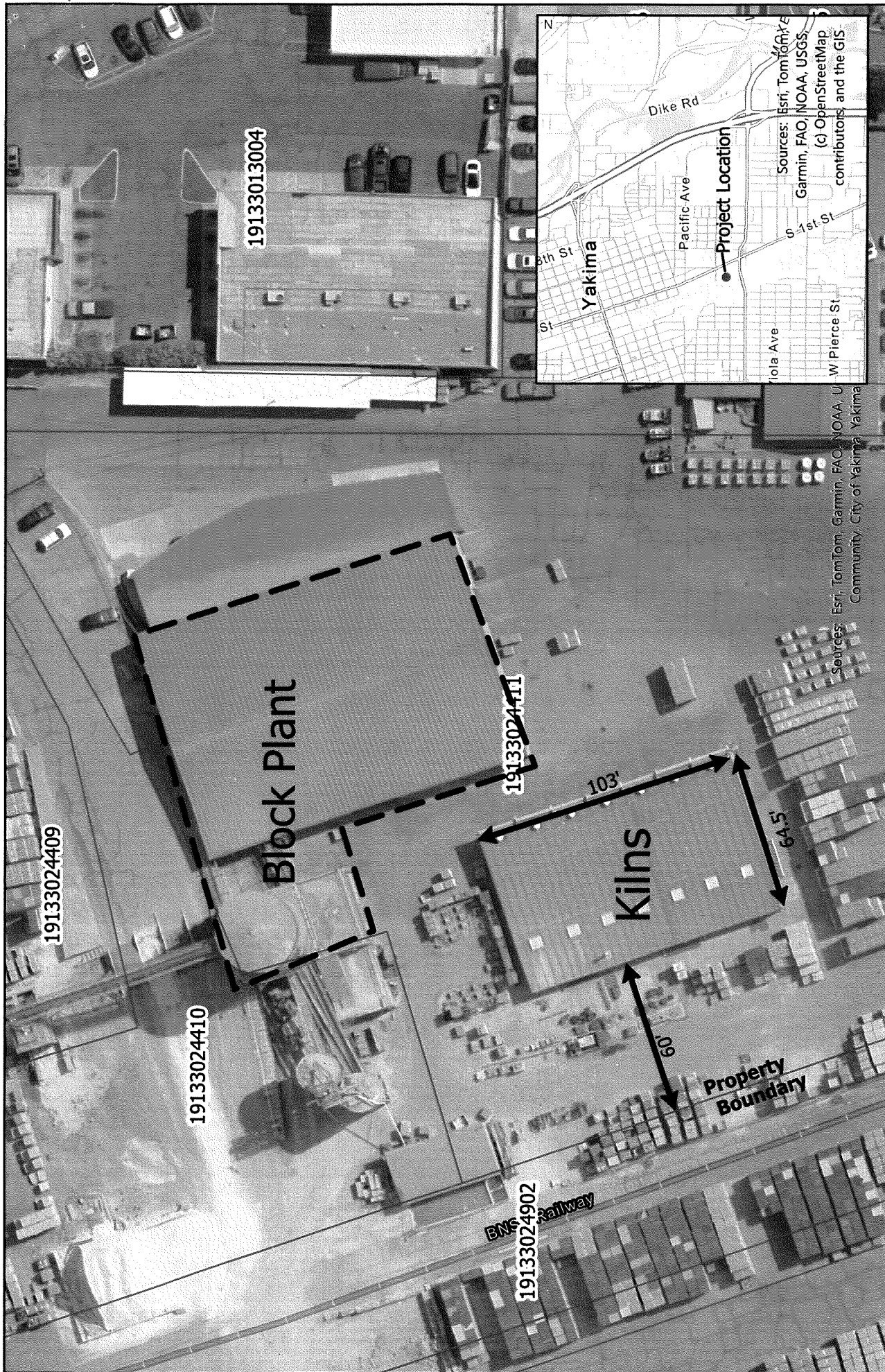
Name _____

Title _____

Name and Title of the Responsible Official for the permit, if Different than Above:

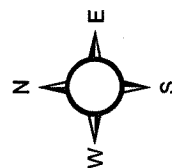
Name Troy Brown

Title Block Plant Manager



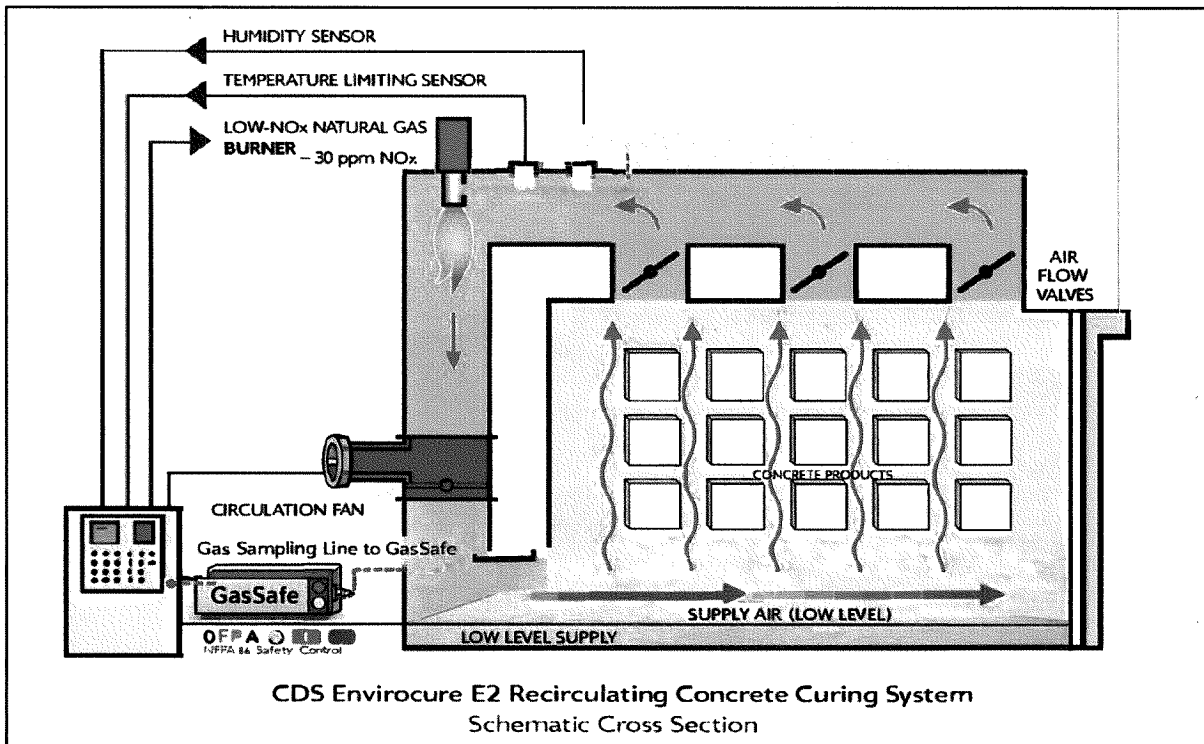
Western Materials Block Plant and Kilns Plot Plan

Yakima County Parcels

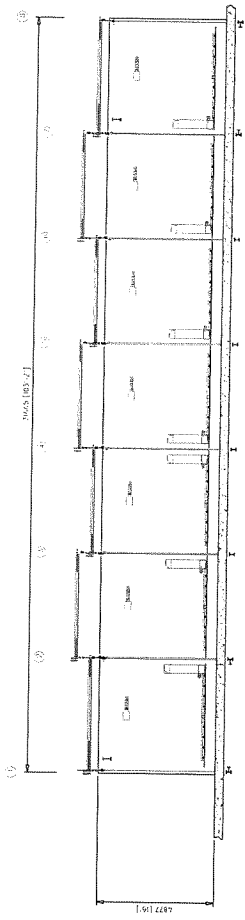


Note: The kiln building resides on the property line. There is no stack.
Any emissions that do occur mainly happen when the kiln doors are opened.

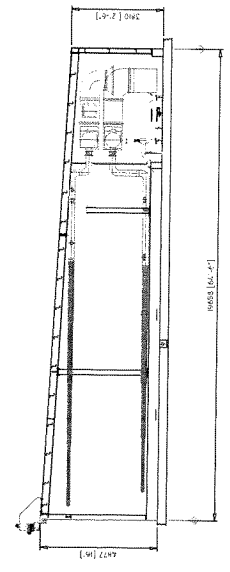
Process Flow Diagram



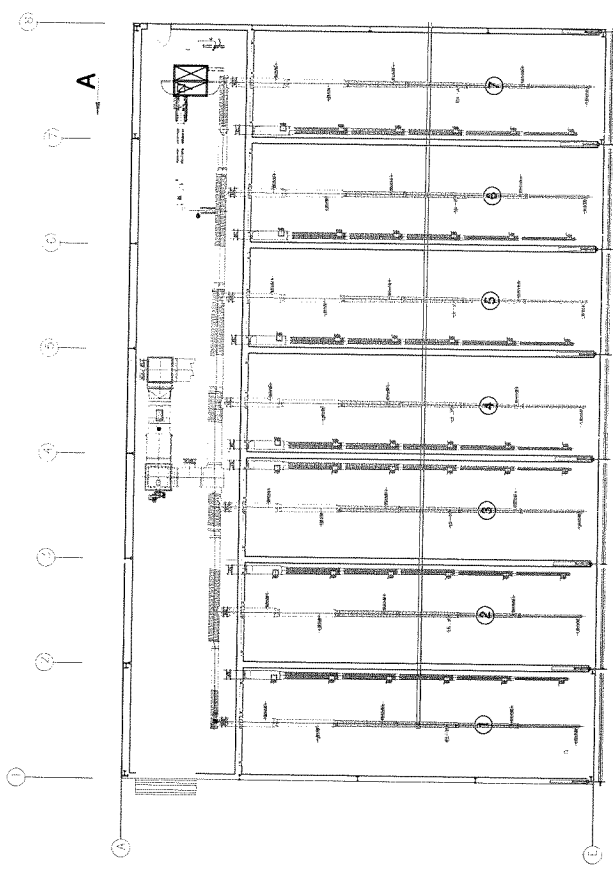
Gas-Safe Sampler: CO/CH₄ Monitoring Unit connected to Allen Bradley PLC Controls with SCADA



VIEW C-C



VIEW A-A



Plan View

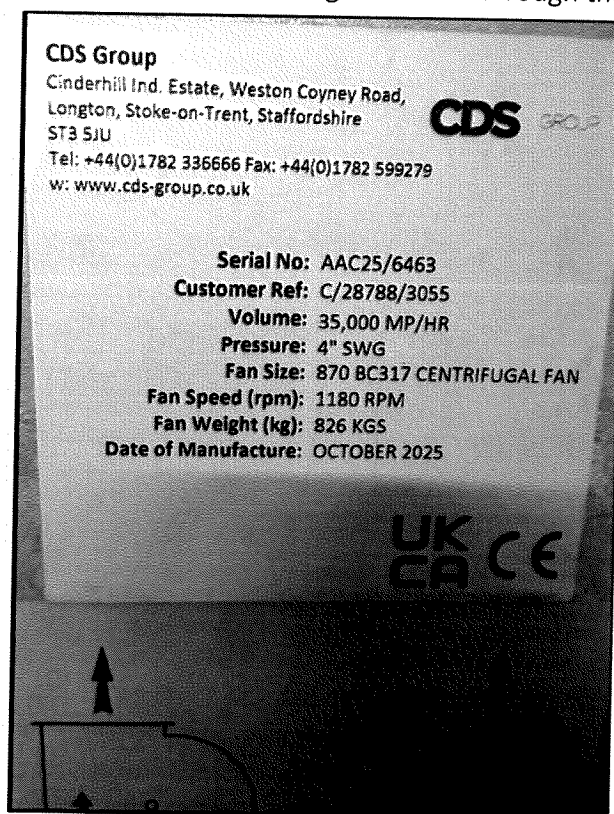
DO NOT SCALE - IF IN DOUBT, ASK THE DRAWING REMAINS THE PROPERTY OF CERAMIC DRIVING SYSTEMS & ANY NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT FROM CERAMIC DRIVING SYSTEMS LIMITED		CDS GROUP		LOCATION: PREPARED CERAMIC SYSTEM CONTRACT NO: E7737 SCALE: 1/8" = 1'-0"		DATE: 1/10/2023 DRAWN: E. P. S. / J.		REVISIONS	
THIS DRAWING REMAINS THE PROPERTY OF CERAMIC DRIVING SYSTEMS & ANY NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT FROM CERAMIC DRIVING SYSTEMS LIMITED		CDS GROUP		LOCATION: PREPARED CERAMIC SYSTEM CONTRACT NO: E7737 SCALE: 1/8" = 1'-0"		DATE: 1/10/2023 DRAWN: E. P. S. / J.		REVISIONS	

New Equipment Installed at Western Materials Kilns

Comtherm In-Direct Fired "Max-Eff" Natural Gas Fired Burner designed to Low NOx standards.



Centrifugal Circulation Fan for blowing heated air through the kiln chambers.



Western Materials Emission Calculations

Emission totals are calculated using emission factors from the 2009 permit, verified by comparing to AP-42 Emission Factors where available, scaled to the new natural gas usage and airflow.

Combustion process for drying of concrete block			
Heavy-Duty Natural Gas-Fired Pipeline Compressor Engines (assume 4-cycle rich burn)			
Pollutant	Emission Factor (lb/MMBTU)	Actual Emissions (tons/yr)	Potential Emissions (tons/yr)
CO ₂	110	63.00	157.50
TOC	0.27	0.15	0.39
TNMOC	0.03	0.02	0.04
CH ₄	0.24	0.14	0.34

Total BTU/Yr **1,145,477,851** * From CDS Gas Usage - WM.pdf

Total MMBTU/yr **1,145**

$$\text{Actual Emissions} \left(\frac{\text{tons}}{\text{yr}} \right) = \frac{\text{MMBTU}}{\text{yr}} \times \text{Emission Factor} \left(\frac{\text{lb}}{\text{MMBTU}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

Natural Gas Combustion			
AP-42: Emission Factors for Natural Gas Combustion, Table 1.4-2			
Pollutant	Emission Factor (lb/10 ⁶ scf)	Actual Emissions (tons/yr)	Potential Emissions (tons/yr)
Lead	0.0005	2.73E-07	6.82E-07
N ₂ O (uncontrolled)	2.2	0.0012	0.0030
PM (total)	7.6	0.0041	0.0104
PM (condensable)	5.7	0.0031	0.0078
PM (filterable)	1.9	0.0010	0.0026
SO ₂	0.6	0.0003	0.0008
TOC	11	0.0060	0.0150
CH ₄	2.3	0.0013	0.0031
VOC	5.5	0.0030	0.0075
From AP-42 Appendix A, Miscellaneous Data and Conversion Factors	1050	BTU	per SCF

$$\text{Actual Emissions} \left(\frac{\text{tons}}{\text{yr}} \right) = \text{Emission Factor} \left(\frac{\text{lb}}{10^6 \text{ scf}} \right) \times \frac{10^6 \text{ scf}}{1,050 \text{ MMBTU}} \times \frac{\text{MMBTU}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

WM is keeping the existing steam generator. They are replacing the Air Heating System (burner) with:
In-Direct Fired "MAX-EFF" Natural Gas Fired Burner rated at 220 kW/Hr, manufactured to LowNox Regulations.

Vapor (steam) Generator				
Vapor Generator Maximum Emissions				
Pollutant	Emissions (ppmv)	Emissions (mg/m3)	Actual Emissions (tons/yr)	Potential Emissions (tons/yr)
CO	50	43.9	0.0007	0.0017
NOx	10	9.6	0.0001	0.0004

Flow Rate: kg/hr	2	* From CDS Energy Usage Comparison - Western Materials.pdf pg 4
Total kg/yr	11,760	2 kg/hr x 24 hr/day x 5 day/wk x 49 wk/yr
Density of Water Vapor(kg/m3)	0.682	@ temperature of 120°F and standard atm pressure

$$Actual\ Emissions\ \left(\frac{tons}{yr}\right) = Emissions\ \left(\frac{mg}{m^3}\right) \times Density\ of\ Vapor\ \left(\frac{m^3}{0.682\ kg}\right) \times 11,760\ \frac{kg}{year} \times \frac{ton}{9.072 \times 10^8 mg}$$

CDS Primary Air Circulation Fan*				
Pollutant	Emissions (ppmv)	Emissions (mg/m³)	Actual Emissions (tons/yr)	Potential Emissions (tons/yr)
NO	21.8	20.4	0.0003	0.0007
NOx	22.8	22	0.0003	0.0007
CO	12.8	11.2	0.0001	0.0004
CO ₂	87,358.3	120,421.1	1.5610	3.9026

* Used prior Air Heating equipment modeling with new air flow usage as proxy for new equipment emissions

Prior

Equipment Convect-Air Model 230 Air Heating System Flowrate 10 m³/hr

New Equipment High Efficiency Primary Air Circulation Fan Flowrate 2 m³/hr

$$Actual\ Emissions\ \left(\frac{tons}{yr}\right) = Emissions\ \left(\frac{mg}{m^3}\right) \times 2\ \frac{m^3}{hr} \times 24\ \frac{hr}{day} \times 245\ \frac{day}{yr} \times \frac{1.1023 \times 10^{-9} ton}{mg}$$

Calculations derived from Appendix A (page 12 of 13) of 2009 Western Materials Clean Air Permit

Category Pollutant Emission Calculations:

Actual Hours of Operation	48	Hr/Wk	See Plant Run Time tab for hours of operation
Potential Hours of Operation	120	Hr/Wk	See Plant Run Time tab for hours of operation
Total 2021 - 2025 avg. Sand & Gravel Use	41,885.8	Tons/Yr	See Material Usage tab for product average
Total 2021 - 2025 avg. Cement Use	4,822.6	Tons/Yr	See Material Usage tab for product average
Total 2021 - 2025 avg. Pumice Use	4,820.0	Tons/Yr	See Material Usage tab for product average
Average Actual Product	45,722.9	Tons/Yr	See Plant Run Time tab for product totals
Average Actual Product	22,861.4	yd ³ /Yr	See Plant Run Time tab for product totals
Potential Product	114,307.2	Tons/Yr	See Plant Run Time tab for product totals
Potential Product	57,153.6	yd ³ /Yr	See Plant Run Time tab for product totals

Density of Raw Materials

AP-42, Appendix A-8,
Concrete

4000 lb/yd³

Aggregate, Sand, and Cement Emissions From AP-42 11.12-2 (6/06)	Uncontrolled PM10 (lb/Ton)	Actual Emissions (Tons/yr)	Potential Emissions (Tons/yr)
Aggregate delivery to ground storage	0.0033	93.86	234.65
Sand delivery to ground storage	0.00099	18.08	45.20
Aggregate transfer to elevated storage	0.0033	93.86	234.65
Sand transfer to elevated storage	0.00099	18.08	45.20
Cement delivery to silo	0.00099	4.77	11.94
Weigh hopper loading	0.0028	144.28	360.70
Emissions from Haul Roads - No Emissions (all paved surfaces)	0	0	0
Total PM10 emissions		372.94	932.34

Emissions from: Aggregate Handling and Storage Piles: Incoming gravel and sand are stockpiled outside next to the entrance. Assume emissions are similar to a crushing site to be conservative. For U and M, see AP42 Version 5.

Emission (lbs/ton) = $k(0.0032) * (U/5)^{1.37} / (M/2)^{1.4}$	Emission Factor (lb/ton)	Actual Emissions (ton/yr)	Potential Emissions (ton/yr)
Emission = $0.35(0.0032) * (8.15/5)^{1.37} / (2.525/2)^{1.4}$	0.001578	81.33	203.32

Total Emissions Using AP-42 and Scaled Data from Previous Source Tests		
Pollutant	Actual Emissions (tons/yr)	Potential Emissions (tons/yr)
PM ₁₀	454.26	1,135.66
SO _x	0.0003	0.0008
NO _x	0.0005	0.0012
CO	0.0010	0.0024
CO ₂	64.56	161.41
TOC	0.16	0.40
CH ₄	0.14	0.35
TNMOC	0.02	0.04
Lead	2.73E-07	6.82E-07

* 2009 Permit Calculations were done incorrectly



Yakima Regional Clean Air Agency INSTRUCTIONS FOR PERMIT APPLICATION

Use this sheet as a checklist to determine when your application is substantially complete.

Each PERMIT APPLICATION for the construction, installation or establishment of a new air contaminant source, or modification of existing air pollution source or control equipment or permit, needs to be accompanied by the following information to be considered complete:

Included N/A

- ☒ ☐ Process flow sheets and equipment layout diagrams.
- ☒ ☐ Control equipment manufacturer, model number, size, serial numbers (for each piece of control equipment).
- ☒ ☐ Quantify average and maximum hourly throughput values, average yearly totals, and maximum concentrations for each pollutant.
- ☒ ☐ Applicant's calculation of the kinds and amounts of emissions for each emission point, materials handling operation or fugitive category (both controlled and uncontrolled).
- ☒ ☐ Plot plan including identification of proposed emission points to the atmosphere, distance to property boundaries, height of buildings and stack height above ground level.
- ☒ ☐ Identification of raw materials and/or product specifications (physical and chemical properties) and typical ranges of operating conditions as related to each emission point (toxic air contaminants require a separate summary); Material Safety Data Sheets (MSDS) should be included in the PERMIT APPLICATION for all compounds used.
- ☒ ☐ Identification of the methods/equipment proposed for prevention/control of emissions to the atmosphere.
- ☐ ☒ Information sufficient to demonstrate the ability of the emission controls proposed as being consistent with those provided in the applicable regulations (BACT/NSPS/RACT/NESHAPS/LAER analysis). See attached worksheet for typical layout of BACT analysis information.
- ☐ ☒ The kinds and amounts of emission offset credits proposed for assignment when operations are within a non-attainment boundary (see WAC 173-400-120 and 131).
- ☐ ☒ Estimates of the proposed project ambient impact under average and least favorable conditions where pertinent to PSD (WAC 173-400-720) or Toxic Air Pollutants (WAC 173-460) requirements.
- ☐ ☒ Additional information, evidence, or documentation as required by the Board of Directors, or the Control Officer, to show that the proposed project will meet federal, state and local air pollution control regulations.
- ☐ ☒ For applications that include equipment that has previously been approved, authorized or registered, a lapse is considered to have occurred if the registration fees are delinquent for more than one calendar year or the source has not operated within five years prior to the receipt of any required PERMIT APPLICATION (WAC 173-400-110).
- ☒ ☐ Applications that include previously approved or authorized equipment require that additional information regarding previous owners or approvals be provided so that YRCAA records can be updated. Equipment registered and/or approved for a given company cannot be authorized without a legal name change, purchase of company or equipment, or a legal contract or subcontract to do business with or for the approved source. Responsibility for operation of authorized equipment rests with the registered source.
- ☒ ☐ All applications need to be accompanied with a completed SEPA checklist or SEPA determination. YRCAA may process the SEPA determination, if no other agency has done it. In this case a SEPA checklist with the proper fees must be submitted with the NSR application.

The application transmittal shall conform to YRCAA review requirements wherever possible as detailed in the General Regulations for Air Pollution Sources (WAC 173-400).

Each drawing, document, or other form of transmittal considered by the applicant to be proprietary and confidential must be suitably identified as confidential in red ink, and signed and dated by the applicant or its agent. Be aware that YRCAA follows the requirements in 40 CFR 2 for determination of confidentiality. YRCAA may not process company sensitive information as confidential.

Orders of Approval (to construct, modify, or install) are issued for specific equipment or processes described in the application. Changes to the processes or control equipment are not allowed without new source review (Permit Application and Permit) if these changes result in an emission of a different type or an increase in emissions (WAC 173-400-110). Process equipment changes that result in decreased emissions require notification to YRCAA.

The SIC code is identified as the four digit major group classification in the 1987 Standard Industrial Code Classification Manual listing of SIC codes can be obtained for free from the internet.

Mail or deliver in person the completed application package to:

Yakima Regional Clean Air Agency
186 Iron Horse Court, Suite 101
Yakima, WA 98901-2303

Application fees must accompany application for the application to be considered complete. An invoice will be sent out for the Engineering review after final decision on the application. Make checks payable to "Yakima Regional Clean Air Agency" or "YRCAA".

The PERMIT APPLICATION package submitted must be complete. All applications are screened for completeness before processing. Applicants submitting incomplete application packages will be notified of their incomplete status and may result in a delay in processing the application.

City of Yakima - proposed proj. is exempt. Planning dept. Trevor Mart